
CONSULTANT'S REPORT

1. **Describe the part(s) of the building for which the proposed project is required. Include, if applicable, details of number of rooms affected and the gross floor area of the building or portion of the building affected.**

The following are the works proposed as part of this Summer Works application.

Category 4 Mechanical Works:

-Bike Rack
-LED Lighting
-Heat pumps
-Electrical Vehicle (EV) Charging provision

The project involves all areas of the school to include two buildings:
Building 1 includes the main school. The works will involve all teaching spaces, GP room, SEN Unit, office, staff room, library, toilets, corridors and ancillary areas.
The areas affected are shown in the plans below with a floor area of 6652m2.

Building 2 includes the existing PE hall
The works will involve the hall, toilets, Changing areas, office and ancillary areas.
The areas affected are shown in the plans below with a floor area of 864m2.

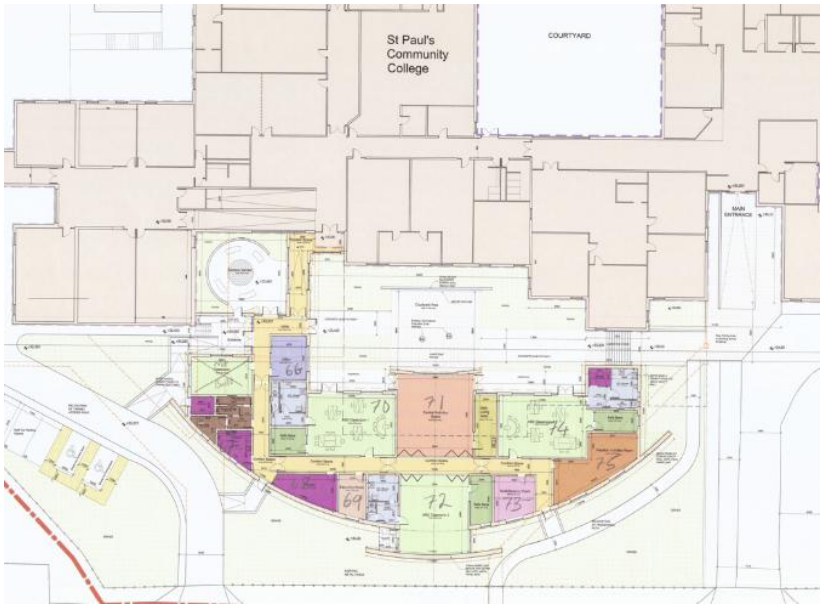
Below depicts Buildings 1 & Building 2



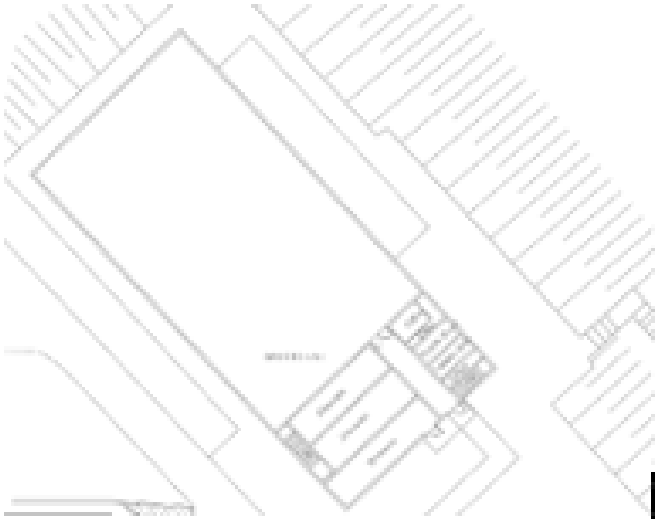
Below depicts Building 1 (Main School)



The layout below depicts the SEN unit located adjacent to building 1



<u>Below depicts Buildings 2 (Sports Hall)</u>



2. Provide a full explanation of the nature and extent of the defect(s) with supporting photographs, and floor plans (or site plan of school) with affected area highlighted. (See circular for more information)

Building 1 Main building) is currently being heated by means of natural gas fired boilers (see photo below). It is proposed that a new air source heat pump be installed to meet 90% of the school's annual heating demand.



Building 1 – (SEN Unit section) is currently being heated by means of a natural gas fired boiler (see photo below). It is proposed that a new air source heat pump be installed to meet 90% of the school's annual heating demand.



Building 2 (Hall) is currently being heated by means of a natural gas fired boiler. It is proposed that a new air source heat pump be installed to meet 90% of the schools annual heating demand.



This application is for the installation of a new air source heat pump for the three plantrooms.

The existing radiators and pipework through the existing school building will be replaced.

Building 1 (Main school)

The heating pipework in the main school building is a single pipe heating system installed serving high level radiators. The system was installed over 40 years ago.

This system results in uneven heat distribution, with radiators furthest from the boiler receiving cooler water. This is less energy efficient, as more heat is lost along the loop and the system control and balancing is difficult, making temperature regulation unreliable.

Its proposed to replace the existing radiators and pipework with new radiators and pipework sized for lower flow temperatures (around 40–55 °C) instead of the high-temperature system currently installed to facilitate the proposed new heat pump installation.







The existing control panels in the three plantrooms will be upgraded to facilitate the proposed new heat pump installations

Lighting Installation

The Lighting Installation throughout the school buildings do not comply with current Department Guidelines and is not fit for purpose. The Existing light fittings are old fluorescent type fittings with a combination of high frequency T5 lamps and switch start T8 lamps. Replacement bulbs for these lamps are no longer available.

The existing light fittings are a combination of surface mounted linear fluorescents, surface mounted 2D type downlights, these fittings are inefficient and expensive to operate.

Some of the existing twin fluorescent fittings are now operating with only 1 functioning lamp resulting in reduced Lux levels in each space.

The PE Hall lighting consists of Metal Halide and do not comply with current Department Guidelines and are not fit for purpose

















Typical Light Fittings – Fluorescent Lamps, Damaged Diffusers, Lamps missing etc

Lighting replacement to include replacement of fluorescent lighting with new LED lighting.
The school have difficulty sourcing replacement fluorescent tubes as suppliers are only stocking LED fittings.

3. **When was the affected part(s) of the building last replaced and/or remedial works carried out? Where applicable, a description of previous remedial works should be included.**

The heating system pipework & radiators in building 1 (main school) was installed over 40 years ago. The main boiler plant was installed in recent years. The electrical installation was installed over 40 years ago.

The SEN section of the building 1 was constructed in 2016.

The hall building Mechanical & electrical services were installed over 30 years ago

4. **What evidence is there of an effective maintenance programme for the affected area(s)?**

The boiler is serviced annually by a local plumbing contractor.

5a. Please indicate below by ticking the box(es) relevant to your project if including a climate action element of works in the proposed project:

Attic Insulation	☐	**Cavity Wall Insulation**	☐	**Bike Rack**	☐ X
Air Tightness works	☐	**LED lighting**	X	**Heat Pumps**	X
Electric Vehicle (EV) charging provision	☐ X				

5. All proposed projects should include a breakdown of, including costs per m² of building area affected by the proposed works.

All proposed projects should be fully itemised as follows: -

Item	Description	Quantity	Unit
1	Preliminaries	1	1
2	New Radiators and heating pipework	192	1
3	Two - port valves to teaching spaces and wall mounted stats	29	1
4	Replacement of three speed pumps with variable speed pumps	3	1
5	Electrical Wirings	3	1
6	Testing & Commissioning	1	1
7	Handover Documents	1	1
8	**Climate Action (Breakdown overleaf)**	1	1

All proposed Climate action aspects of projects should be fully itemised as follows: -

Item	Description	Quantity	Unit
1	Preliminaries	1	1
2	EV Charging	1	1
3	Bike Rack	1	1
4	LED Lighting		
	Stripout and Recycling Charges	970	1
	Supply Light Fittings	970	1
	Supply PIR's	150	1
	Installation of the above	1120	1
	Cabling of the Above	1120	1
	Containment for the above	1120	1
	Alterations to Distribution Boards	20	1
5	Heat Pumps		
	New Air Source Heat pump and buffer tank	3	1
	Circulating pumps	3	1
	BMS controls	3	1
	Plantroom pipework and fittings	3	1
6	Builders Works (openings, cleaning, painting, concrete works etc)	1	1
7	Electrical Wiring	1	1
8	Testing & Commissioning	1	1
9	Handover Documents	1	1